Lyubov Titova

List of Publications by Year in descending order

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96 papers	3,192 citations	172457 29 h-index	149698 56 g-index
97 all docs	97 docs citations	97 times ranked	4756 citing authors

#	Article	IF	Citations
1	An ultrafast terahertz scanning tunnelling microscope. Nature Photonics, 2013, 7, 620-625.	31.4	380
2	Size vs Surface: Tuning the Photoluminescence of Freestanding Silicon Nanocrystals Across the Visible Spectrum via Surface Groups. ACS Nano, 2014, 8, 9636-9648.	14.6	293
3	Polarization and temperature dependence of photoluminescence from zincblende and wurtzite InP nanowires. Applied Physics Letters, 2007, 91, .	3.3	196
4	High Light Absorption and Charge Separation Efficiency at Low Applied Voltage from Sb-Doped SnO₂/BiVO₄ Core/Shell Nanorod-Array Photoanodes. Nano Letters, 2016, 16, 3463-3474.	9.1	166
5	Temperature dependence of photoluminescence from single core-shell GaAsâ€“AlGaAs nanowires. Applied Physics Letters, 2006, 89, 173126.	3.3	158
6	Phase diagram of the ultrafast photoinduced insulator-metal transition in vanadium dioxide. Physical Review B, 2012, 85, .	3.2	148
7	Microscopic origin of the Drude-Smith model. Physical Review B, 2017, 96, .	3.2	140
8	Intense THz pulses cause H2AX phosphorylation and activate DNA damage response in human skin tissue. Biomedical Optics Express, 2013, 4, 559.	2.9	119
9	Intense THz pulses down-regulate genes associated with skin cancer and psoriasis: a new therapeutic avenue?. Scientific Reports, 2013, 3, 2363.	3.3	98
10	Terahertz pulse induced intervalley scattering in photoexcited GaAs. Optics Express, 2009, 17, 9620.	3.4	92
11	Terahertz conductivity of the metal-insulator transition in a nanogranular VO2 film. Applied Physics Letters, 2010, 97, .	3.3	90
12	Generation of Terahertz Radiation by Optical Excitation of Aligned Carbon Nanotubes. Nano Letters, 2015, 15, 3267-3272.	9.1	86
13	Perpendicular magnetization reversal, magnetic anisotropy, multistep spin switching, and domain nucleation and expansion in Ga1â^'xMnxAs films. Journal of Applied Physics, 2005, 98, 063904.	2.5	81
14	Dynamical Control over Terahertz Electromagnetic Interference Shielding with 2D Ti₃C₂T_y MXene by Ultrafast Optical Pulses. Nano Letters, 2020, 20, 636-643.	9.1	75
15	Evolution of the Ultrafast Photoluminescence of Colloidal Silicon Nanocrystals with Changing Surface Chemistry. ACS Photonics, 2015, 2, 595-605.	6.6	60
16	Ultrafast carrier dynamics in BiVO₄ thin film photoanode material: interplay between free carriers, trapped carriers and low-frequency lattice vibrations. Journal of Materials Chemistry A, 2016, 4, 18516-18523.	10.3	60
17	Ultrafast percolative transport dynamics in silicon nanocrystal films. Physical Review B, 2011, 83, .	3.2	57
18	Temperature dependent photoluminescence of single CdS nanowires. Applied Physics Letters, 2006, 89, 123123.	3.3	56

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19	Ultrafast Zero-Bias Photocurrent in GeS Nanosheets: Promise for Photovoltaics. ACS Energy Letters, 2017, 2, 1429-1434.	17.4	53
20	Equilibrium and non-equilibrium free carrier dynamics in 2D Ti ₃ C ₂ T _x MXenes: THz spectroscopy study. 2D Materials, 2018, 5, 035043.	4.4	53
21	Dynamics of Strongly Degenerate Electronâ^'Hole Plasmas and Excitons in Single InP Nanowires. Nano Letters, 2007, 7, 3383-3387.	9.1	49
22	Competition between cubic and uniaxial anisotropy inGa1â^'xMnxAsin the low-Mn-concentration limit. Physical Review B, 2005, 72, .	3.2	41
23	Resonant Excitation and Imaging of Nonequilibrium Exciton Spins in Single Coreâ^'Shell GaAsâ^'AlGaAs Nanowires. Nano Letters, 2007, 7, 588-595.	9.1	41
24	Balancing Light Absorption and Charge Transport in Vertical SnS₂ Nanoflake Photoanodes with Stepped Layers and Large Intrinsic Mobility. Advanced Energy Materials, 2019, 9, 1901236.	19.5	41
25	Resonant Raman scattering from CdS nanowires. Applied Physics Letters, 2006, 88, 043118.	3.3	39
26	Low-temperature photoluminescence imaging and time-resolved spectroscopy of single CdS nanowires. Applied Physics Letters, 2006, 89, 053119.	3.3	38
27	Charge transfer state emission dynamics in blue-emitting functionalized silicon nanocrystals. Physical Chemistry Chemical Physics, 2015, 17, 30125-30133.	2.8	37
28	Two-Dimensional MXenes Mo₂Ti₂C₃T_z and Mo₂TiC₂T_z: Microscopic Conductivity and Dynamics of Photoexcited Carriers. ACS Applied Energy Materials, 2020, 3, 1530-1539.	5.1	37
29	Growth and properties of ferromagnetic In1â^'Mn Sb alloys. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 20, 325-332.	2.7	36
30	Selective excitation of exciton transitions in PTCDA crystals and films. Physical Review B, 2010, 81, .	3.2	27
31	Magnetic CdSe-based quantum dots grown on Mn-passivated ZnSe. Applied Physics Letters, 2002, 80, 1237-1239.	3.3	25
32	Enhancing the solar energy conversion efficiency of solution-deposited Bi₂S₃ thin films by annealing in sulfur vapor at elevated temperature. Sustainable Energy and Fuels, 2017, 1, 2134-2144.	4.9	25
33	Bottom-up, scalable synthesis of anatase nanofilament-based two-dimensional titanium carbo-oxide flakes. Materials Today, 2022, 54, 8-17.	14.2	24
34	External control of the direction of magnetization in ferromagnetic InMnAs/GaSb heterostructures. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 20, 370-373.	2.7	21
35	Time-Resolved Terahertz Spectroscopy of Free Carrier Nonlinear Dynamics in Semiconductors. IEEE Photonics Journal, 2010, 2, 578-592.	2.0	20
36	Ultrafast carrier dynamics and the role of grain boundaries in polycrystalline silicon thin films grown by molecular beam epitaxy. Semiconductor Science and Technology, 2016, 31, 105017.	2.0	20

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37	Ultrafast Zero-Bias Surface Photocurrent in Germanium Selenide: Promise for Terahertz Devices and Photovoltaics. ACS Applied Materials & Interfaces, 2019, 11, 5492-5498.	8.0	20
38	Topology-Based Prediction of Pathway Dysregulation Induced by Intense Terahertz Pulses in Human Skin Tissue Models. Journal of Infrared, Millimeter, and Terahertz Waves, 2018, 39, 887-898.	2.2	12
39	Dynamics of Photoexcited Carriers in Polycrystalline PbS and at PbS/ZnO Heterojunctions: Influence of Grain Boundaries and Interfaces. Journal of Physical Chemistry C, 2018, 122, 11682-11688.	3.1	12
40	Annealing effects on interdiffusion in layered FA-rich perovskite solar cells. AIP Advances, 2021, 11, .	1.3	12
41	Photoexcited Free Carrier Dynamics in Bi₂Se₃, (Bi_{0.75}In_{0.25})₂Se₃, and (Bi_{0.50}In_{0.50})₂Se₃: From Topological to Band Insulator. ACS Photonics, 2020, 7, 2778-2786.	6.6	11
42	Intense terahertz pulses inhibit Ras signaling and other cancer-associated signaling pathways in human skin tissue models. JPhys Photonics, 2021, 3, 034004.	4.6	11
43	Scalable, inexpensive, one-pot, facile synthesis of crystalline two-dimensional birnessite flakes. Matter, 2022, 5, 2365-2381.	10.0	11
44	Observation of photoluminescence related to Lomerâ€“Cottrell-like dislocations in ZnSe epilayers grown onin situcleaved (110)GaAs surfaces. Journal of Applied Physics, 2005, 97, 013519.	2.5	10
45	Polarized photoluminescence and time-resolved photoluminescence from single CdS nanosheets. Applied Physics Letters, 2008, 92, .	3.3	10
46	Tuning iron pyrite thin film microstructure by sulfurization of columnar iron precursors. Solar Energy Materials and Solar Cells, 2013, 117, 306-314.	6.2	10
47	Spatially resolved photoluminescence mapping of single CdS nanosheets. Applied Physics Letters, 2008, 92, .	3.3	9
48	Intense picosecond THz pulses alter gene expression in human skin tissuein vivo. , 2013, , .		9
49	Terahertz Polarizers Based on 2D Ti₃C₂T_z MXene: Spin Cast from Aqueous Suspensions. Advanced Photonics Research, 2020, 1, 2000084.	3.6	8
50	Synthesis and optoelectronic properties of a promising quaternary metal oxide light absorber CuBiW₂O₈. Journal of Materials Chemistry A, 2021, 9, 1643-1654.	10.3	8
51	Group-IV monochalcogenides GeS, GeSe, SnS, SnSe. , 2020, , 119-151.		7
52	(Invited) Ultrafast Carrier Dynamics in Silicon Nanocrystal Films. ECS Transactions, 2012, 45, 21-29.	0.5	6
53	Title is missing!. Journal of Superconductivity and Novel Magnetism, 2003, 16, 453-456.	0.5	5
54	Enhancement of hot-carrier photoluminescence with intense terahertz pulses. Applied Physics Letters, 2018, 112, .	3.3	4

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55	Terahertz Polarizers Based on 2D Ti₃C₂T_z MXene: Spin Cast from Aqueous Suspensions. Advanced Photonics Research, 2020, 1, .	3.6	3
56	ZnCdSe quantum structures by (110)-cleaved-edge overgrowth: MBE growth and Î¼-PL characterization. Physica Status Solidi (B): Basic Research, 2004, 241, 519-522.	1.5	2
57	Observation of Combined Ferromagnetic/Paramagnetic Phase in Ga1?xMnxAs by Magnetic Circular Dichroism. Journal of Superconductivity and Novel Magnetism, 2005, 18, 131-135.	0.5	2
58	Magnetic circular dichroism in ZnSe/Ga1âˆ’xMnxAs hybrid structures with Be and Si co-doping. AIP Conference Proceedings, 2005, , .	0.4	2
59	Ultrafast THz-pulse-induced tunneling dynamics in an STM. , 2014, , .		2
60	Imaging ultrafast dynamics on the nanoscale with a THz-STM. , 2014, , .		2
61	Biological effects of intense THz pulses on human skin tissue models. , 2017, , .		2
62	Pressure and thermal annealing effects on the photoconversion efficiency of polymer solar cells. AIP Advances, 2021, 11, .	1.3	2
63	Terahertz emission from 2D nanomaterials. , 2018, , .		2
64	Fabrication and characterization of IIIâ€“V semiconductor superlattices with sinusoidal compositional modulation. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 13, 1143-1146.	2.7	1
65	Spatially-resolved Photoluminescence Imaging of CdS and GaAs/AlGaAs Nanowires. AIP Conference Proceedings, 2007, , .	0.4	1
66	Effect of intense THz pulses on expression of genes associated with skin cancer and inflammatory skin conditions. Proceedings of SPIE, 2014, , .	0.8	1
67	Terahertz Spectroscopy: Studying Carrier Dynamics in Semiconductor Nanostructures. ECS Transactions, 2015, 69, 51-57.	0.5	1
68	Ultrafast carrier dynamics in BiVO<inf>4</inf>: Interplay between free carriers, trapped carriers and low-frequency lattice vibrations. , 2016, , .		1
69	Terahertz Spectroscopy of 2D Materials. , 2018, , .		1
70	Intensity-dependent Suppression of Calcium Signaling in Human Skin Tissue Models Induced by Intense THz Pulses. , 2018, , .		1
71	Carrier Dynamics in SnS<inf>2</inf> Single Crystals and Vertical Nanostructures: Role of Edges. , 2018, , .		1
72	Genomic Mechanisms of THz-Induced Cancer Dysregulation in Human Skin. , 2019, , .		1

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73	Time-resolved THz spectroscopy of the Ultrafast Photoinduced Insulator-metal Phase Transition of VO_2. , 2012, , .		1
74	2D MXenes: Terahertz Properties and Applications. , 2020, , .		1
75	A Novel THz Electromagnetic Interference Shielding Material: 2D Ti3C2Ty MXene. , 2020, , .		1
76	Structural and magneto-optical studies on multiple quantum dots containing magnetic semiconductors. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 1283-1287.	0.8	0
77	Terahertz nonlinear spectroscopy of free-carriers in semiconductors. , 2009, , .		0
78	Terahertz nonlinear spectroscopy of free-carriers in direct bandgap semiconductors. Proceedings of SPIE, 2010, , .	0.8	0
79	High power terahertz sources for nonlinear spectroscopy of direct bandgap semiconductors. , 2010, , .		0
80	Application of high power terahertz sources to nonlinear spectroscopy of direct bandgap semiconductors. , 2010, , .		0
81	Imaging ultrafast nanoscale dynamics with a THz-pulse-coupled STM. , 2013, , .		0
82	Analysis of sprayed Carbon nanotube films on rigid and flexible substrates. , 2014, , .		0
83	Imaging ultrafast dynamics on the nanoscale with THz-STM. , 2015, , .		0
84	Optical Properties of Single CdS Nanosheets. Journal of the Korean Physical Society, 2008, 53, 3073-3076.	0.7	0
85	Dielectric Properties of Heavy Oils Using Terahertz Time-Domain Spectroscopy. , 2011, , .		0
86	Transient Reflective Ultra-broadband THz Spectroscopy. , 2011, , .		0
87	Using Terahertz Time-Domain Spectroscopy to Determine the Glass Transition Temperature of Heavy Oils. , 2012, , .		0
88	Terahertz STM for Imaging Ultrafast Nanoscale Dynamics. , 2014, , .		0
89	Emission of THz radiation by GeS nanosheets. , 2017, , .		0
90	Hot-Carrier Induced Photoluminescence Enhancement and Quenching in GaAs and InP Driven by Intense THz Pulses. , 2018, , .		0

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91	Ultrafast zero-bias photocurrent in GeS nanosheets. , 2018, , .		0
92	Zero-valent Au, Cu, and Sn intercalation into GeS nanoribbons: tailoring ultrafast photoconductive response. , 2020, , .		0
93	Transient photoconductivity and photo-excited carrier dynamics in (Bi1-xInx)2Se3 thin films. , 2020, , .		0
94	Microscopic conductivity and ultrafast carrier dynamics in molybdenum-based MXenes: THz spectroscopy study. , 2020, , .		0
95	Genomic Signature of Membrane Permeation Induced by Intense THz Pulses. , 2020, , .		0
96	From Graphene Oxide to Graphene: Tuning THz Properties by Reduction and Metal Intercalation. , 2020, , .		0